June 20, 2006

Mr. Christopher M. Crane
President and CEO
AmerGen Energy Company, LLC
200 Exelon Way, KSA 3-E
Kennett Square, PA 19348

SUBJECT: OYSTER CREEK GENERATING STATION - PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT NO. 05000219/2006006

Dear Mr. Crane:

On May 19, 2006, the US Nuclear Regulatory Commission (NRC) completed a team inspection at your Oyster Creek Generating Station. The enclosed inspection report documents the inspection findings, which were discussed with Mr. Tim Rausch, Site Vice President, and members of his staff at an exit meeting on May 19, 2006.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, the team concluded that implementation of the corrective action program at Oyster Creek was generally adequate and improving. However, the station did not always recognize that individual problems could be indicative of a larger performance issue. In addition, the station did not consistently use trend data to identify potential problems, as evidenced by two examples where failures could have been prevented.

There were two Green Findings identified by the inspectors during this inspection. The first was associated with a failure to identify that a main steam isolation valve (MSIV) closed too fast during a surveillance test. Subsequently, the plant was started up with an MSIV exhibiting a closure time outside the specified acceptable levels. The second was associated with a failure to take timely corrective actions for known deficiencies in the augmented off-gas system, impacting the system's reliability and availability. The first finding was determined to be a violation of NRC requirements; the second finding was determined not to be a violation of NRC requirements. However, because of the very low safety significance and because it has been entered into your corrective action program, the NRC is treating the first finding as a Non-Cited Violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC, 20555-0001, with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001; and the NRC Resident Inspector at the Oyster Creek facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publically Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Ronald R. Bellamy, Chief
Projects Branch 7
Division of Reactor Projects

Docket Nos. 50-219
License Nos. DPR-16

Enclosure: Inspection Report No. 05000219/2006006
w/Attachment: Supplemental Information

cc w/encl:
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Site Vice President, Oyster Creek Nuclear Generating Station, AmerGen
Plant Manager, Oyster Creek Generating Station, AmerGen
Regulatory Assurance Manager, Oyster Creek, AmerGen
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Vice President - Operations Support, AmerGen
Vice President - Licensing and Regulatory Affairs, AmerGen
Director Licensing, AmerGen
Manager Licensing - Oyster Creek, AmerGen
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-219
License No:	DPR-16
Report No:	05000219/2006006
Licensee:	AmerGen Energy Company, LLC
Facility:	Oyster Creek Generating Station
Location:	Forked River, New Jersey
Dates:	April 24 - May 19, 2006
Team Leader:	B. S. Norris, Senior Project Engineer, Division of Reactor Projects (DRP)
Inspectors:	R. Treadway, Resident Inspector, DRP A. Rosebrook, Project Engineer, DRP S. McCarver, Project Engineer, DRP
Approved by:	Ronald R. Bellamy, Chief Projects Branch 7 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000219/2006-006; 04/24/2006 - 05/15/2006; Oyster Creek Generating Station; Biennial Baseline Inspection of the Identification and Resolution of Problems; a violation was identified in the area of problem identification, and a finding was identified in the area of corrective actions.

This team inspection was performed by three regional inspectors and one resident inspector. Two findings of very low safety significance (Green) were identified during this inspection, one of which was classified as a Non-Cited Violation (NCV). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Identification and Resolution of Problems

The team concluded that the implementation of the corrective action program (CAP) at Oyster Creek was generally adequate, and improving compared to documented inspection results since the last team inspection of the corrective action program in May 2004. The team determined that Oyster Creek had a low threshold for identifying problems and entering them in the CAP; however, the station did not always recognize that individual problems could be indicative of a larger performance issue. In addition, the station did not consistently use trend data to identify potential problems, as evidenced by two examples where opportunities to prevent failures existed but were not acted upon. Once entered into the system, items were screened and prioritized in a timely manner using established criteria. Items entered into the CAP were properly evaluated commensurate with their safety significance. However, documentation supporting conclusions in several causal evaluations and the operability determinations was weak. Corrective actions were typically implemented in a timely manner. Licensee audits and self-assessments were generally critical at identifying problems. On the basis of interviews conducted during the inspection, workers at the site expressed freedom to enter safety concerns into the CAP.

There was one Green NCV and one Green Finding identified by the inspectors during this inspection. The NCV was associated with the failure to identify that a main steam isolation valve (MSIV) closed too fast during a surveillance test; as a result the plant was started up with an MSIV exhibiting a closure time outside the specified acceptance criteria. The Finding was associated with a failure to take timely corrective actions for repetitive deficiencies in the augmented off-gas system, impacting the system's reliability and availability.

a. NRC Identified and Self-Revealing Findings

Cornerstone: Initiating Events

- Green: The inspectors identified a Green NCV of 10CFR50, Appendix B, Criterion XVI, "Corrective Action," for the failure to identify that the "A" outboard main steam isolation valve (MSIV) did not stroke closed within the allowable time specified in the surveillance test procedure in February 2006. As a result of not recognizing that the valve did not

meet stroke time acceptance criteria, the plant was started up with an inoperable MSIV. This was found by the inspectors during a review of data from a test performed in May 2006 during a forced outage. In May 2006, the same valve again failed to stroke closed in the allowable time; however, the station operators recognized the problem this time. The valve closing mechanism was adjusted before the plant was started up in May 2006. The failure to identify the failure in February 2006 was entered into the licensee's CAP.

The finding is more than minor and is similar to an example described in NRC Inspection Manual Chapter (IMC) 0612, Appendix E, because when the closure time for the February 2006 test was calculated correctly, a Technical Specification (TS) limit was exceeded. The finding is associated with the equipment performance attribute of the Initiating Events cornerstone; in that, the fast closure of the MSIV challenged the reactor vessel integrity and increased the potential for a loss of coolant accident. The finding was determined to be of very low safety significance (Green) because the finding would neither result in exceeding the TS limit for identified reactor coolant system leakage nor would the finding have affected other mitigation systems resulting in a total loss of their safety function. The finding has a cross-cutting aspect in the area of human performance due to inattention to detail by the personnel performing the surveillance test procedure.

Cornerstone: Public Radiation Safety

- Green: The inspectors identified a Green Finding for the failure to take timely actions to correct known deficiencies associated with the augmented off-gas (AOG) system, which impacted the system's reliability and availability since October 2003. In 2003, Oyster Creek performed a Common Cause Analysis (CCA) due to multiple equipment issues and system trips of the AOG system. The CCA recommended four system enhancements and also that routine preventive maintenance was necessary to address some of the deficiencies which had contributed to system unavailability. The preventative maintenance tasks were developed; however, none of the recommended system enhancements were completed. From 2003 to September 2005, the "B" train of AOG system was unavailable due to the degraded condition of the recombiner bed. When "B" train was returned to service in October 2005, it operated intermittently until February 13, 2006, when a hydrogen detonation rendered the "B" train unavailable. Oyster Creek completed a second CCA which identified the same enhancements that had been recommended in 2003. A system improvement plan was prepared to address how the plant was going to resolve the issues in the upcoming years. This performance deficiency was entered into the licensee's CAP.

  The finding is more than minor because it is associated with the plant equipment attribute of the Public Radiation Safety cornerstone and affected the objective to ensure adequate protection of public health and safety from exposure of radioactive materials released into the public domain as a result of routine civilian nuclear plant operation. The finding was determined to be of very low safety significance (Green) because there was no radiological release associated with the event. The finding has a cross-cutting aspect in the area of problem identification and resolution due to the failure to take timely corrective actions to minimize the unavailability and unreliability of the AOG system.

b. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (PI&R) (Biennial - IP 71152B)

1. Effectiveness of Problem Identification

a. Inspection Scope

The inspection team reviewed the procedures describing the corrective action program (CAP) at the Oyster Creek Generating Station (OCGS). OCGS identified problems by initiating Issue Reports (IR). The IR was classified as a Condition Report (CR) for conditions adverse to quality, human performance problems, equipment nonconformances, industrial or radiological safety concerns, and other significant issues. The CRs were subsequently screened for operability, categorized by priority (A through D) and significance (1 through 5), and assigned to a department for evaluation and resolution.

The team reviewed CRs selected across the seven cornerstones of safety in the NRC's Reactor Oversight Program (ROP) to determine if problems were being properly identified, characterized, and entered into the CAP for evaluation and resolution. The team selected items from the maintenance, operations, engineering, emergency preparedness, physical security, radiation safety, training, and oversight programs to ensure that OCGS was appropriately considering problems identified in each functional area. The team used this information to select a risk-informed sample of CRs that had been issued since the last NRC PI&R inspection, which was conducted in May 2004.

The team selected items from the IR system that had not been classified as CRs, and from other processes at Oyster Creek, to verify that they appropriately considered these items for entry into the CAP. Specifically, the team reviewed a sample of maintenance work orders, engineering work requests, operator log entries, control room deficiency and work-around lists, operability determinations, engineering system health reports, completed surveillance tests, current temporary configuration change packages, and training requests. The team also reviewed a sample of operating experience issues for applicability to OCGS, and the associated actions. The documents were reviewed to ensure that underlying problems associated with each issue were appropriately considered for resolution via the corrective action process. In addition, the team interviewed plant staff and management to determine their understanding of and involvement with the CAP. The CRs and other documents reviewed, and a list of key personnel contacted, are listed in the Attachment to this report.

The team reviewed a sample of Nuclear Oversight audits, including the most recent audit of the CAP, the CAP trend reports, and the departmental self-assessments. This review was performed to determine if problems identified through these evaluations were entered into the CAP system, and whether the corrective actions were properly completed to resolve the deficiencies. The effectiveness of the audits and self-assessments was evaluated by comparing audit and self-assessment results

against self-revealing and NRC-identified findings, and current observations during the inspection.

The team considered risk insights from the NRC's and OCGS's risk analyses to focus the sample selection and plant tours on risk-significant components. The team determined that the five highest risk-significant systems were the reactor protection system, the 4160 volt alternating-current (AC) / 125 volt direct-current (DC) systems, the emergency diesel generators, the core spray system, and the automatic depressurization system. For the selected risk-significant systems, the team reviewed the applicable system health reports, a sample of work requests and engineering documents, plant log entries, and results from surveillance tests and maintenance tasks.

b. Assessment and Findings

There was one Green, NRC-identified, Non-Cited Violation (NCV) identified in this area involving the failure to identify that a main steam isolation valve failed to meet acceptance criteria during the performance of a surveillance test.

In general, the team considered the identification of equipment deficiencies to be adequate at the OCGS. There was a low threshold for the identification of individual issues; however, the station did not always recognize that individual problems could be indicative of a larger performance issue. For example, there were numerous CRs related to instances where a procedure was not followed as written. However, it was not until the completion of the Root Cause Analysis for the August 2005 grassing event that OCGS management recognized that there was a problem with the station's attitude toward procedure adherence.

The housekeeping and cleanliness of the plant was not consistent and may have hindered the ability of personnel to easily identify equipment deficiencies or could mask worsening conditions.

The team identified two examples where station personnel did not use available trending information to identify that the affected equipment might fail the next surveillance test:

- The inspectors noted that the fast closure time of the "A" outboard main steam isolation valve (MSIV) for the last two surveillance tests prior to the test in May 2006 was indicative of a potential failure. In October 2004 and in February 2006, the MSIV closed in 3 seconds, as measured by the plant process computer; and the MSIV closed in 3.9 seconds and 3.6 seconds , respectively, as measured by stopwatch. The acceptance criteria is 3 to 10 seconds. Two consecutive closure times at the minimum time by PPC, and a slower time by stopwatch, indicated that there was a good chance the valve would fail the next time it was tested. In May 2006, during a forced outage, the MSIV was tested and failed at 2.0 seconds. The valve was repaired before the plant was started up.

- In Fall 2005, the #2 emergency diesel generator (EDG) was determined to be inoperable because of a low specific gravity on one battery cell. At the same time,

the "A" control room heating, ventilation, and air conditioning (CR HVAC) system was inoperable for planned maintenance. This placed the plant in an unanalyzed condition, and caused the station to initiate a shutdown; the CR HVAC was returned to operation before the shutdown was completed. During the station's root cause investigation, OCGS determined that one of the contributing causes for the condition was the failure to elevate within the station organization a known degrading condition; specifically, the results of the recent specific gravity surveillance test results, which showed a negative trend.

The team also reviewed a sampling of Nuclear Oversight audits and departmental self-assessments and determined that they were generally critical and effective at identifying problems.

(1) Failure to Identify That a Main Steam Isolation Valve Did Not Close Within Required Surveillance Acceptance Criteria

Introduction: The team identified a Green NCV of 10CFR50, Appendix B, Criterion XVI, "Corrective Action," for the failure of OCGS to properly identify that the "A" outboard MSIV (NSO4A) did not stroke closed within the allowable time specified in the surveillance test procedure.

Description: On May 6, 2006, operators performed surveillance test procedure 602.4.002, "MSIV Closure and In-Service Test (IST)," to verify that the MSIVs closed in accordance with the OCGS Technical Specification (TS) requirements. During performance of the surveillance test, each MSIV was closed and two methods were used to time the valve stroke from full open to full closed. The first method was manual using a stopwatch and the second method used the plant process computer (PPC). By stopwatch, the times for all MSIVs were within the acceptance band; however, by the PPC, the "A" outboard MSIV closed too quickly. The computer determined the valve closure time by noting the difference between indicated open position and the indicated closed position. The PPC displays the time in one second intervals; the times can be further extracted to tenths of a second if needed, within 26 hours after completion of the test.

The TS required closure time of the MSIVs is three to ten (3 to 10) seconds. On May 6, valve NSO4A closed in two seconds, according to the PPC, and the valve was declared inoperable. The three second closing time is to minimize the pressure increase in the reactor vessel due to a rapid cessation of steam flow. The ten second closing time is to minimize a loss of coolant accident and the resultant offsite dose rate. The valve closing mechanism was adjusted, the valve was retested satisfactorily, and the valve was restored to service on May 7, 2006.

The inspectors reviewed the PPC data from the two previous surveillance tests to assess past MSIV performance. The previous surveillance test had been performed on February 3, 2006. When reviewing the PPC printout for that test, the inspectors noted that the data from the PPC was the same as for the May 2006 test. The closure time for that test should have been recorded as two seconds, similar to the May 2006 test.

However, the February 2006 test documented a closure time of three seconds, due to the operator recording "CLOSED" time from the PPC. As a result, the valve closure time was not recorded as failing to meet the test acceptance criteria. Oyster Creek restarted from a forced maintenance outage in February 2006, without identifying that valve NS04A did not close within the specified time. The inspectors discussed this observation with engineering personnel, and AmerGen created corrective action program report IR 491198 to document these concerns and continue further investigation.

The performance deficiency is the failure to identify a condition adverse to quality. Specifically, during the February 2006 surveillance test, the operators performing the test did not recognize that the closure time for the "A" outboard MSIV did not meet the acceptance criteria defined in the surveillance procedure and the OCGS TSs.

Analysis: The finding is not subject to traditional enforcement. The finding is more than minor and is similar to an example described in NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues and Cross-Cutting Aspects," Section 2.a, because when the closure time was calculated correctly, a TS limit was exceeded.

The finding is associated with the Initiating Events Cornerstone because it affected the cornerstone objective to limit the likelihood of an event that could upset plant stability and challenge critical safety functions during shutdown; specifically, the attribute of equipment performance relative to the MSIV fast closure time challenging the reactor vessel integrity and increased potential for a loss of coolant accident. The inspectors performed a Phase 1 analysis of the finding in accordance with IMC 0609, "Significance Determination Process," Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations." The finding was determined to be of very low safety significance (Green) because the finding would neither result in exceeding the TS limit for identified reactor coolant system leakage nor would the finding have affected other mitigation systems resulting in a total loss of their safety function. Review of plant design criteria showed that the resultant pressure increase, due to the MSIV closing in less three seconds but greater than two seconds, would not have challenged the reactor vessel integrity.

The performance deficiency has a cross-cutting aspect in the area of human performance due to inattention to detail by the personnel performing the surveillance test procedure.

Enforcement: 10CFR50, Appendix B, Criterion XVI, "Corrective Action," requires that conditions adverse to quality be promptly identified and corrected. Contrary to the above, on February 3, 2006, OCGS failed to identify that the "A" outboard MSIV did not close within the TS required time of three-to-ten seconds. As a result, OCGS restarted the reactor from a maintenance outage with an inoperable MSIV, a condition prohibited by TS. However, because the finding was of very low safety significance (Green) and was entered into their corrective action program (IR 491198), this violation is being treated as an NCV, consistent with Section IV.A of the NRC Enforcement Policy.

(NCV 05000219/2006006-01, Failure to Identify That a MSIV Did Not Close Within TS Surveillance Acceptance Criteria)

2. Prioritization and Evaluation of Issues

a. Inspection Scope

The inspection team reviewed the CRs listed in the attachment to the inspection report to assess whether OCGS adequately evaluated and prioritized the identified problems. The team selected the CRs to cover the seven cornerstones of safety identified in the NRC's ROP. The team also considered risk insights from the OCGS Probabilistic Risk Analysis to focus the CR sample. The review was expanded to five years for OCGS's evaluation of repetitive problems associated with the reactor manual control system, including incorporation of industry operating experience information for applicability to their facility.

The CRs reviewed encompassed the full range of OCGS evaluations, including root cause analyses, apparent cause evaluations, common cause analyses, and work group evaluations. The review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of the resolutions. For significant conditions adverse to quality, the team reviewed OCGS's corrective actions to preclude recurrence. The team observed meetings of the Station Oversight Committee (SOC - the CR screening committee), in which OCGS personnel reviewed incoming CRs for prioritization, and evaluated preliminary corrective action assignments, analyses, and plans. The team also reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems. The team assessed the backlog of corrective actions, emphasizing the backlogs in the maintenance and engineering departments, to determine, individually and collectively, if there was an increased risk due to delays in implementation. The team further reviewed equipment performance results and assessments documented in completed surveillance procedures, operator log entries, and trend data to determine whether the equipment performance evaluations were technically adequate to identify degrading or non-conforming equipment.

b. Assessment

No findings of significance were identified in the area of prioritization and evaluation of issues.

The team determined that OCGS performance in this area was adequate. The station screened the CRs appropriately and properly classified them for significance. There were no items in the engineering and maintenance backlogs that were risk significant, individually or collectively. The team considered the efforts of the SOC added value to the CAP process; as needed, the discussions about specific topics were detailed, and there were no classifications or operability determinations with which the NRC disagreed. However, the SOC appeared to be over-burdened due to their decision to have many IRs "brought-back" to the committee for a re-evaluation, and with frequently

trying to solve the problem. This has been recognized by the station management, and senior managers routinely attend the SOC meetings to mentor the group.

The quality of the causal analyses reviewed was generally acceptable, although the team noted that the documentation was frequently weak in the level of detail and did not support the final conclusion. As an example, the inspectors identified two Apparent Cause Evaluations (one for an explosive detector and the other for a failure of a reactor mode switch) that had inadequate basis to support the determined cause, and to support the associated corrective actions. Discussions with OCGS engineering and maintenance personnel allowed the inspectors to understand the basis for each of the evaluations, which were determined to be adequate.

The team noted a similar weakness in documentation associated with operability determinations. The team concluded that the operability determinations had the correct conclusions with respect to operability, but the documentation was weak and did not fully support the conclusions. For example, the operability determination for the "A" CR HVAC was inadequate to allow the inspectors to understand the basis for operability. After discussions with station personnel, OCGS revised the operability determination to contain sufficient information to adequately support the operability conclusion. The inspectors did note that the quality of the causal analysis and the operability determinations was improved for those performed later in the inspection period.

The inspectors performed an expanded evaluation of problems related to the reactor manual control (RMC) system - the system that controls the operator's manual movement of the control rods. The inspectors reviewed a large sample over five years of deficiency reports, maintenance work packages, engineering evaluations, internal and external operating experience, the system health report, and interviews with the system engineer. The review indicated that the number of documented problems associated with the RMC system has increased over the last several years. The inspectors did not note any trends associated with repetitive failures of the same equipment, or that insights from operating experience were not incorporated into the planned repairs to the system. The system engineer discussed the age of the system, the problems found at other plants of similar vintage, and the long range plan to upgrade the system during an upcoming outage.

3. Effectiveness of Corrective Actions

a. Inspection Scope

The team reviewed the corrective actions associated with selected CRs to determine whether the actions addressed the identified causes of the problems. The team reviewed CRs for repetitive problems to determine whether previous corrective actions were effective. The team also reviewed OCGS's timeliness in implementing corrective actions and their effectiveness in precluding recurrence for significant conditions adverse to quality. The team reviewed the CRs associated with selected non-cited violations and findings to determine whether OCGS properly evaluated and resolved these issues.

b. Assessment and Findings

There was one Green NRC-identified Finding identified in this area involving the failure to implement timely and effective corrective actions for the augmented off-gas system.

The team concluded that corrective actions were generally adequate and completed in a timely manner. For significant conditions adverse to quality, corrective actions were identified to prevent recurrence. The team noted the incorporation of industry operating experience information in the determination of the corrective actions, as appropriate. However, the inspectors determined the documented corrective actions for two previously documented performance deficiencies were less than adequate.

- In the first case, the failure of the 52B emergency service water pump to start due to low ambient temperature was documented in an IR. An operability determination was written and compensatory actions were initiated, which eventually led to a revision of the associated alarm response procedure. The revised procedure contained non-conservative manual operator actions, was determined to be a violation of TS 6.8.1 (written procedures shall be established, maintained, and implemented), and NCV 2004002-01 was issued. During the inspectors review of the NCV during this inspection, it was noted that the original IR did not address the performance deficiency in the NCV (i.e., the failure to develop adequate written procedures). Although the procedure was subsequently revised, the corrective action program did not provide a mechanism to ensure appropriate corrective actions were assigned and completed. As a result, the operability determination, which was based on the previous revision of the alarm response procedure, was not revised to be consistent with the new revision of the procedure. Since corrective actions were completed and the operability determination was not relied upon to show equipment operability during the time it was invalid, this issue is of minor significance and did not violate any NRC requirements.

- In the second case, the performance issue was an inadequate root cause analysis (RCA) for a grassing event in August 2005. During the development of the RCA by OCGS, the RCA team missed data which resulted in the event timeline being significantly in error. This was documented as a Finding in Inspection Report 2005011. OCGS corrected the event timeline, but did not determine why the RCA team failed to utilize the missed data; and, therefore, OCGS did not fully address the performance deficiency. An IR was written to capture the inspectors' concern. This issue was determined to be of minor significance and did not violate any NRC requirements.

(1) Failure to Take Timely Corrective Actions to Ensure the Availability and Reliability of the Augmented Off-Gas System

Introduction: The inspectors identified a Green Finding for the failure to take timely actions to correct deficiencies associated with the augmented off-gas (AOG) system, which impacted the system's reliability and availability since October 2003.

Description: In October 2003, OCGS performed a Common Cause Analysis (CCA) due to nine equipment issues and eleven trips of the AOG system, which impacted the reliability of the AOG system between March and September 2003. The inspectors noted that the CCA recommended four system enhancements to improve the reliability and availability of the system; including an alternate power supply, component upgrades, and system modifications. The CCA also noted that routine preventive maintenance was necessary to address some of the equipment deficiencies which had contributed to the unavailability of the system. The inspectors noted that, as recommended in the CCA, OCGS developed preventative maintenance tasks for the AOG system; however, none of the recommended system enhancements were completed.

Since 2003, the "B" train of AOG system was unavailable for two years due to the degraded condition of the recombiner bed. After the "B" train was returned to service in October 2005, it operated intermittently due to various equipment related issues until February 2006. On February 13, 2006, a hydrogen detonation rendered the "B" train unavailable. OCGS is scheduled to complete an evaluation of the issue in June 2006. The initial NRC review of the detonation is contained in NRC Inspection Report 05000219/2006002, dated May 4, 2006.

In April 2006, OCGS completed a second CCA due to repetitive failures of the "A" train of the AOG system. From January through March 2006, the "A" train experienced eight trips and five equipment issues, resulting in the system being repeatedly unavailable during the period. The CCA identified the same major system enhancements that had been recommended in 2003. Since then, a system improvement plan was prepared to address how the plant was going to resolve the issues in the upcoming years.

Although OCGS identified the negative trend of deficiencies with the AOG system in 2003, the recommended corrective actions from the 2003 CCA were not completed with the result that the system continued to experience performance issues.

The performance deficiency is the failure to take timely corrective actions for known deficiencies. Specifically, since 2003, OCGS failed to correct repetitive equipment deficiencies, which resulted in the increased unreliability and unavailability of the AOG system.

Analysis: The finding is not subject to traditional enforcement. The finding is more than minor because it is associated with the plant equipment attribute of the Public Radiation Safety Cornerstone and affected the objective to ensure adequate protection of public health and safety from exposure of radioactive materials released into the public domain as a result of routine civilian nuclear plant operation. The finding was evaluated using IMC 0609, Appendix D, "Public Radiation Safety," because it is associated with the radioactive effluent release program. The finding was determined to be of very low safety significance (Green) because there was no radiological release associated with the event.

The finding has a cross-cutting aspect in the area of problem identification and resolution due to the failure to take timely corrective actions to minimize the unavailability and unreliability of the AOG system.

Enforcement: The AOG system is not safety related, and therefore no violation of regulatory requirements occurred. However, the failure to take timely corrective actions for known deficiencies associated with public radiation safety was considered a finding. This was entered into their corrective action program (IR 491196).

(FIN 05000219/2006006-02, Failure to Take Timely Corrective Actions to Ensure the Availability and Reliability of the Augmented Off-Gas System)

4. Assessment of Safety Conscious Work Environment

a. Inspection Scope

During the interviews with station personnel, the team assessed the safety conscious work environment (SCWE) at the OCGS. Specifically, the team interviewed station personnel to assess whether they were hesitant to raise safety concerns to their management and/or the NRC, due to a fear of retaliation. The team also reviewed OCGS's Employee Concerns Program (ECP) to determine if employees were aware of the program and had used it to raise concerns. The team reviewed a sample of the ECP files to ensure that issues were entered into the corrective action program.

b. Assessment and Findings

No findings of significance were identified.

The team determined that the plant staff were aware of the importance of having a strong SCWE and expressed a willingness to raise safety issues. No one interviewed had experienced retaliation for safety issues raised, or knew of anyone who had failed to raise issues. All persons interviewed had an adequate knowledge of the CAP and ECP. Based on these limited interviews, the team concluded that there was no evidence of an unacceptable SCWE.

4OA6 Meetings, including Exit

On May 19, 2006, the team presented the inspection results to Mr. Timothy Rausch, Oyster Creek Site Vice President, and other members of the Oyster Creek staff, who acknowledged the findings. The inspectors confirmed that no proprietary information reviewed during inspection was retained.

ATTACHMENT: Supplemental Information

In addition to the documentation that the inspectors reviewed (listed in the attachment), copies of information requests given to the licensee are in ADAMS, under accession number ML061430186.

ATTACHMENT - SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

R. Barbiari, Systems Engineering
D. Barnes, Electrical Design Engineering Manager
K. Barnes, Licensing Department
M. Basti, Employee Concerns Program Representative
R. Brown, Operations Support Manager
P. Cervenka, Operations Support
B. Cislo, Radiation Protection Instrumentation Coordinator
P. Cowan, Corporate Licensing Manager
D. Fawcett, Emergency Preparedness Engineer
T. Fenton, Engineering - Instrumentation and Controls
J. Frank, System Manager, Reactor Manual Control System
M. Godknecht, Engineering - Programs
J. Kandasamy, Regulatory Assurance Manager
R. Murdock, Measurement & Test Equipment Coordinator
J. O'Rourke, Assistant Engineering Manager
K. Polletti, Emergency Preparedness Manager
T. Powell, SOC Engineering Representative
T. Rausch, Site Vice President
J. Render, Radiation Protection Manager
T. Roberts, Supervisor, Radiation Protection
P. Scallon, Quality Verification Assessor
S. Schwartz, System Manager
J. Sontchi, Instrumentation & Calibration Engineer
B. Stewart, NOS Auditor/EP Support
M. Taylor, Corporate Employee Concerns Program Representative - Mid-Atlantic
T. Trettel, Fire Protection System Manager
M. Wagner, Corrective Action Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000219/2006006-01	NCV	Failure to Identify That a Main Steam Isolation Valve Failed Did Not Close Within TS Surveillance Acceptance Criteria (Section 4OA2.1.b(1))
05000219/2006006-02	FIN	Failure to Take Timely Corrective Actions to Ensure the Availability and Reliability of the Augmented Off-Gas System (Section 4OA2.3.b(1))

Discussed

05000219/2004002-01	NCV	Failure to Adequately Correct a Condition Adverse to Quality (Section 4OA2.3.b)

LIST OF DOCUMENTS REVIEWED

Procedures:

101.2, Oyster Creek Site Fire Protection Program, Attachment 101.2-3, Revision 54
2000-RAP-3024.01, Control Room Alarm Response Procedures, Revision 131
225.0, Backseating and Unbackseating Station Valves, Revision 17
235, Determination and Correction of Control Rod Drive System Problems, Revision 32
302.2, Control Rod Drive Manual Control System, Revision 28
307, Isolation Condenser, Revision 92
333, Plant Fire Protection System, Revision 82
609.4.007, Fire Water Makeup to Isolation Condensers IST, Revision 16
617.4.002, CRD Exercise and Flow Test/IST Cooling Water Header Check Valve, Revision 42
645.4.019, Redundant Fire Protection Water Supply Pump Operability Test, Revision 15
645.6.020, Redundant Fire Protection Water Supply Pump Functional Test, Revision 7
ABN-06, Control Rod Drive System, Revisions 1 & 2
ABN-32, Abnormal Intake Level, Revisions 0, 1, 3, 10, 11
ABN-52, Loss of USS 1E1, Revision 1
CC-AA-112, Temporary Configuration Changes, Revision 10
EI-AA-1, Employee Issues, Revision 1
EI-AA-101, Employee Concerns Program, Revision 5
EI-AA-101-1001, Employee Concerns Program Process, Revision 3
EI-AA-101-1002, Employee Concerns Program Trending Tool, Revision 2
EMG-3200.01A, Attachment F, Support Procedure 5, Fire Water for RPV Water Level Control, Revision 12
EMG-3200.01B, Support Procedure-24 Alternate Boron Injection, Revision 14
HU-AA-1211, Briefing - Pre-Job, Heightened Level of Awareness, Infrequent Plant Activity and Post-Job Briefings, Revision 2
LS-AA-120, Issue Identification and Screening Process, Revision 4
LS-AA-125, Corrective Action Program Procedure, Revision 9
LS-AA-126, Self-Assessment Program Revision 4
MA-AA-716-003, Tool Pouch/Minor Maintenance, Revision 2
MA-AA-716-004, Complex Troubleshooting Action Plan, Revision 4
MA-AA-716-040, Control of Portable Measurement and Test Equipment Program, Revision 3
MA-AA-716-230-1001, Oil Analysis Interpretation Guideline, Revision 4
MA-AA-716-234, FIN Team, Revision 0
OP-AA-108-111, Adverse Condition Monitoring and Contingency Planning, Revisions 0, 1, 2
RAP-B6a, ESW Pump A Trouble, Revision 0
RAP-B6b, ESW Pump B Trouble, Revision 0
RAP-B7a, ESW Pump C Trouble, Revision 0
RAP-B7b, ESW Pump D Trouble, Revision 0
RP-AA-301, Radiological Air Sampling Program, Revision 0
RP-AA-502, Catch Containment Program, Revision 0
RP-AA-700, Controls for Radiation Protection Instrumentation, Revision 0
RP-AA-800, Control, Inventory, and Leak Testing of Radioactive Sources, Revision 2

Nuclear Oversight Audits/Surveillances:

NOSA-OYS-04-05, Engineering Programs Area Audit, July 2004
NOSA-OYS-04-06, Organization & Administration, Training & Staffing Audit, January 2006
NOSA-OYS-04-07, Surveillance and Test Program, September 2004
NOSA-OYS-04-08, Procedures, Document Control, & Quality Assurance Records, September 2004
NOSA-OYS-05-01, Corrective Action Program, April 2005
NOSA-OYS-05-03, Security Plan, FFD, Access Authorization, PADS Audit, March 2005
NOSA-OYS-05-04, Emergency Preparedness, 50.54(t) Meteorology, April 2005
NOSA-OYS-05-05, Engineering Design Control Audit, October 2005
NOSA-OYS-05-06, Health Physics Functional Area, July 2005
NOSA-OYS-05-07, Operations Functional Area Audit, November 2005

Self Assessments:

Check-In Self-Assessments
Access Control to Rad Areas, November 2005
Contamination Controls, January 2006
Emergency Preparedness Exercise Evaluation, October 2005
Engineering Performance Monitoring, November 2005
Engineering Performance Monitoring Plans Effectiveness Reviews, November 2005
Engineering Technical Expertise, September 2004
Exercise Evaluation/PI Verification, October 2005
Foreign Material Exclusion, June 2004
Foreign Material Exclusion Check-In, September 2005
M&T Mechanical Maintenance Training, October 2005
Management and Execution of Configuration Control, December 2005
NOS Audit & Assessment Issues Follow-Up, December 2005
OCGS Operations B.5.b, Phase 1 Response, September 2005
Operations Procedure AFI OP.4-1, November 2005
Oyster Creek Maintenance Rule Program, January 2005
Radiation Protection, November 2005
Regulatory Affairs Human Performance Follow-Up, January 2006

Focused Area Self-Assessments
Air Operated Valves, February 2005
Corrective Action Program, October 2004
Dosimetry, February 2004
EDG Cable Failure, August 2004
Generic Letter 89-13, September 2005
Licensed Operator Requalification Program, February 2005
Maintenance Rule, January 2005
Mid-Cycle Self-Assessment, February 2005
Nuclear Safety Culture/Reactivity Management, December 2004
Operations Fundamentals/Human Error Prevention, April 2005
Physical Protection, June 2005
Pre-NRC Inspection (95001) White Finding - EAL/EOP Mismatch, May 2005
Problem Identification & Resolution, April 2004

Problem Identification & Resolution, February 2006
Radioactive Material Processing & Transportation, July 2005
Technical Expertise, December 2004

Condition Reports (* denotes a CR generated as a result of this inspection):
(Note: Oyster Creek was using the Lotus Notes program until September 2005, after that they switched to the Passport program)

Lotus Notes CAPs

2000-0365	2004-1007	2004-2384	2004-3934	2005-0542	2005-1439	2005-1747
2000-0492	2004-1024	2004-2422	2004-3943	2005-0543	2005-1465	2005-1751
2000-0549	2004-1062	2004-2449	2004-3994	2005-0573	2005-1467	2005-1763
2001-1592	2004-1153	2004-2499	2004-4012	2005-0581	2005-1501	2005-1892
2004-0044	2004-1184	2004-2500	2004-4265	2005-0696	2005-1505	2005-2086
2004-0065	2004-1284	2004-2511	2005-0141	2005-0696	2005-1523	2005-2092
2004-0100	2004-1314	2004-2512	2005-0165	2005-0891	2005-1527	2005-2098
2004-0105	2004-1376	2004-2525	2005-0202	2005-0920	2005-1552	2005-2110
2004-0165	2004-1392	2004-2626	2005-0209	2005-1035	2005-1556	2005-2158
2004-0273	2004-1418	2004-2635	2005-0277	2005-1074	2005-1562	2005-2161
2004-0346	2004-1441	2004-2657	2005-0284	2005-1082	2005-1565	2005-2212
2004-0449	2004-1489	2004-2722	2005-0313	2005-1109	2005-1572	2005-2258
2004-0573	2004-1572	2004-2744	2005-0330	2005-1113	2005-1580	2005-2291
2004-0683	2004-1722	2004-2799	2005-0344	2005-1118	2005-1593	2005-2295
2004-0728	2004-1733	2004-2910	2005-0387	2005-1213	2005-1594	2005-2346
2004-0744	2004-1986	2004-2947	2005-0417	2005-1269	2005-1594	2005-2348
2004-0752	2004-2018	2004-2986	2005-0442	2005-1350	2005-1632	2005-2362
2004-0785	2004-2119	2004-3536	2005-0477	2005-1351	2005-1657	2005-2397
2004-0821	2004-2120	2004-3583	2005-0526	2005-1407	2005-1664	2005-2409
2004-0850	2004-2276	2004-3657	2005-0532	2005-1418	2005-1672	2005-2411
2004-0943	2004-2340	2004-3920	2005-0540	2005-1425	2005-1735	

Passport CRs

155529	345023	349280	354323	360303	366492	379712
315369	345125	349289	354637	360389	367463	379936
341635	345313	349671	355559	360630	367590	379937
341680	345345	350051	355574	360632	369013	380366
341730	345431	350234	355589	361354	369380	380591
341942	345478	350666	355688	361413	369579	381279
342258	345777	350999	356016	361586	371569	382246
342583	345820	352016	356127	361594	372471	382299
343203	346139	352205	356138	362309	372568	382309
343260	346163	352315	356170	362765	373034	382311
343451	346972	352335	356571	362965	373450	382419
343605	347188	352392	356921	363062	374184	382687
343769	347622	352849	357591	363273	374390	382797
343985	347751	352980	358381	363595	375498	384384
344050	347763	353074	358647	363753	378782	384615
344163	348539	353251	358758	365477	378963	385678
344440	348793	353652	358804	365568	379393	387463
344769	348964	353774	359547	366122	379638	388270

388826	397999	438820	449479	453812	471209	482589
389329	399034	440759	449662	454228	471265	484350*
389428	425257	441689	449690	455614	473697	485153*
389448	425899	441998	450144	455860	473905	488130
389881	426742	444579	450183	455984	476018	490236*
390064	427386	445470	450858	456338	479206	490252*
390102	428294	445554	450881	456505	479945	490409*
390408	428337	445640	451847	459041	480021	490800*
390443	429856	446377	452194	459343	481077	491018*
391418	432357	447843	452708	459391	481425	491193*
391963	432405	448179	453104	461104	481644	491196*
394035	432958	448260	453266	461429	481652	491198*
394871	435524	448614	453495	464665	481831*	491509*
395101	436134	448655	453649	465287	481868	491785*
396982	436153	449393	453743	465607	482227	493705*

Operating Experience Reviews:

10CFR21, Whiting Corporation - Possible Crane Overstress Conditions
NER QC-06-046, Quad Cities Nuclear Plant - MSIV's Tested in Hot Conditions Using Light-to-Light Criteria Fail Acceptance Criteria, March 14, 2006
NRC Bulletin 2005-01, Material Control and Accounting at Reactors and Wet Spent Fuel Storage Facilities
NRC IN 2004-08, Reactor Coolant Pressure Boundary Leakage Attributable to Propagation of Cracking in Reactor Vessel Nozzle Welds
NRC IN 2004-09, Corrosion of Steel Containment and Containment Liner
NRC IN 2004-15, Trip of the Peach Bottom E2 Emergency Diesel Generator on Low Jacket Water Pressure
NRC IN 2005-08, Monitoring Vibration to Detect Circumferential Cracking of Reactor Coolant Pump and Reactor Recirculation Pump Shafts
NRC IN 2005-16, Outage Planning and Scheduling Impacts on Risk
OE03314, Rod Withdrawal During Insert Signal (Susquehanna), April 28, 1989
OE10352, Control Rod Insertion on Withdrawal Signal (Brunswick), October 29, 1999
OE10768, Control Rod Withdrawal During Insert Signal (LaSalle), March 7, 2000
OE15536, Control Rod Insertion on Withdrawal Signal (Fermi), February 19, 2003
OE17296, Control Rod Insertion During a Rod Withdrawal Signal (Columbia), November 11, 2003
OE20672, Two Control Rods Continuously Inserted When Given a Continuous Withdrawal Signal (Cooper), May 18, 2005

Maintenance Work Orders:

A2018689, Oyster Creek Underground Piping Inspection Progress Activity
A2041450, V-1-9 Justification to Delete As-left LLRT
A2068970, Small Leak in Line from MSIV Dashpot on V-1-9
A2086260, V-1-9 Failed its 10% Closure Test
A2092874, ESW Motor Improvement
A2096941, MSIV NS04A Failed to Close

A2097409, V-1-9: Install QSS Sensors & Perform Diagnostic Testing
A2119020, #2 Cooling Circuit on 'A' CR HVAC Unit Has Leak
A2121608, Perform Thermography On "D" Recirc MG Set Voltage Regulator
A2125339, No Crankcase Heaters on "A" CR HVAC
A2141715, 1F10 LLV-1-9/ NS04A PPC Closure Time to Fast
C0036445, Replace 4S1 Entire Switch Assembly with GE Cat #16, Existing Switch Has Been Rebuilt Several Times and Should Be Replaced as a Unit
C0056414, Control Rod Normal In/Out Switch 4S1 is Intermittent in the In Direction
C0510420, Switch Requires Replacement Prior to Startup Due to Excessive Use During 16R Outage
C0540171, Bench Check and Replace Switch 4S3
C0547174, Bench Check and Replace Switch 4S1
C2006257, Repair Leak on Dashpot
C2007828, V-1-9 10% Closure Test Failure Troubleshoot and Repair
C2008093, Repair or Replace Switch 4S1
C2008344, J035 - Replace ESW #2 Keepfill Line ECR 03-00454
C2008781, Install QSS Sensor & Perform Diagnostic Testing
C2012876, Troubleshoot and Repair Closing Time Too Fast V-1-9
R2040581, Lubricate Reactor Manual Controls Sequence Timer
R2056139, Lubricate Reactor Manual Controls Sequence Timer

Open Operability Evaluations:
OC-2005-OE-0001, 1-1 Containment Spray Heat Exchanger, Revision 1
OC-2005-OE-0008, Control Room HVAC, Revisions 1, 2
OC-2005-OE-0009, ESW Keep Full Line, Revision 1
OC-2005-OE-0010, Service Air Bank 5-A Phase, Revision 0
OC-2006-OE-0001, Core Spray Pump (P-20-1A), Revision 0
OC-2006-OE-0002, Emergency Service Water Pump (P-3-3D), Revision 1

Non-Cited Violations and Findings Reviewed:

NCV 2004002-01, Inadequate ESW Procedure Due to a Poor Operability Evaluation
NCV 2004002-02, Access Control to Radiologically Significant Areas
FIN 2004002-03, ALARA Planning and Controls
NCV 2004002-04, Radiation Monitoring Instrumentation and Protective Equipment
NCV 2004003-01, Failure to Correct a Condition Adverse to Quality
NCV 2004003-03, Operator Failure to Recognize Degraded Secondary Containment Airlock
NCV 2004003-04, Inadvertent Loss of Shutdown Cooling
NCV 2004003-05, Human Performance Event Failure to Follow Procedures Led to Failure of Cooling System for EDG #1
NCV 2004003-Licensee Identified, QA Program Did Not Ensure Compliance with 10CFR61.55
NCV 2004004-01, Failure to Adequately Correct a Condition Adverse to Quality
NCV 2004004-02, Green NCV Was Identified for Failure to Correct a Condition Adverse to Quality
NCV 2004004-03, Failure to Maintain the Core Thermal Power below the Licensed Limit
NCV 2004004-04, Inadequate Procedure Resulted in a Temporary Loss of Shutdown Cooling
NCV 2004005-02, Violation of 10CFR20.1501 for Erroneous Radiological Surveys Associated with Repairs to MSIV

NCV 2004005-03, Violation of TS 6.8.1 for Inadequate Written Startup Procedure Causing a Loss of Containment Integrity
NCV 2004006-01, Failure to Perform Corrective Actions for Mode Switch Failure
NCV 2005002-01, Ineffective Corrective Actions Leading to the #1 EDG Being Inoperable
NCV 2005002-02, Ineffective Corrective Actions Leading to the "A" CRD Pump Being Inoperable
NCV 2005002-03, Failure to Implement ODCM Requirements for Radioactive Gaseous and Liquid Effluent Monitoring
NCV 2005002-04, Ineffective Corrective Actions Leading to the "B" IC System Being Inoperable Due to Pressure Loading
NCV 2005002-Licensee Identified, Fire Pump Overspeed Trip Was Not Reset During Maintenance
NCV 2005004-01, Failure to Maintain Primary Containment Penetration Integrity
NCV 2005005-01, Maintenance Rule Reactor Building Floor Drain System (a)(2) Demonstration Invalidated
NCV 2005005-Licensee Identified, Violation of TS 2.3F, 3 of 9 SVs Experienced Setpoint Drift Outside of the TS Limit
FIN 2005006-01, Failure to Perform Containment Spray System Header Nozzle Inspections
NCV 2005006-02, Inadequate Design Control Associated with Containment Spray Suction Valves
NCV 2005006-03, Failure to Perform an Adequate 10CFR50.59 Analysis
NCV 2005008-01, Failure to Provide Protection in Accordance with 10CFR50, Appendix R
FIN 2005010-01, Explosive Detector
NCV 2005011-01, Failure to Follow Procedures
NCV 2005011-03, Untimely State/Local Notification of UE
FIN 2005011-04, Inadequate Root Cause Analysis
NCV 2005011-Licensee Identified, STA and Communicator Did Not Perform ER Duties in a Timely Manner

System Health Overview Reports:

125 VDC Station Distribution System (#735), 1st Quarter 2006
4160 VAC Distribution (#731), 1st Quarter 2006
Augmented Off-Gas System (#231), 1st Quarter 2006
Control Rod Drive, System (# P216/225), 1st Quarter 2006
Core Spray and Automatic Depressurization System (#212), 1st Quarter 2006
Emergency Diesel Generators System (#741), 1st Quarter 2006
Emergency Lighting System (#762), 1st Quarter 2006
Heater Drains, Vent/Pressure Relief (#431), 1st Quarter 2006
Main Steam System (#411), 1st Quarter 2006
Reactor Manual Control System (#628), 1st Quarter 2006

Drawings:

3D-627-17-003, Recirculation System Electrical Elementary Diagram, Revision 1
BR-2004, Condensate Transfer System Flow Diagram, Sheet 2, Revision 83
GE 237E912, Reactor Manual Control System Electrical Elementary Diagram, Revision 32
GE-148F262, Emergency Condenser Flow Diagram, Revision 51

GE-237E912, Reactor Manual Control System, Electrical Elementary Diagram, Sheets 1-8, Revisions 32, 18, 3, 1, 0, 2, 0, 4 (respectively)
JC 147434, Condensate Demineralizer Flow Diagram, Revision 50

Miscellaneous:

ACMC Plan for Continuous Operation with Four Recirculation Loops
ACMC Plan for Intake Trash Cart Motor Failure
ACMC Plan for 'D' RCP MG and Relay While Locked up
ACMC Plan for Augmented Off-Gas
ACMC Plan for 'A' Condensate Pump Seal Leakage
ACMC Plan for 'C' Rx Water Feed Pump Casing Drain
ACMC Plan for #1 EDG Fuel Oil Filter
ACMC Plan for Main Flash Tank 1-1 Inlet Header
Calculation C-1303-241-E610-074, Core Spray NPSH Assessment, Revision 2
Control Room Operator Logs (May 2004 to May 2006)
CY-OC-170-301, Offsite Dose Calculation Manual for Oyster Creek Generating Station
Engineering Department MRC Check and Adjust Report, 1st Quarter 2006
Engineering Change Request (ECR) OC-06-00301, RMC 4TD2 Relay Time Delay Is Too Short, Revision 0
Lesson Plan 2611-PGD-2621.828.0.0019, Fire Protection System for Initial Licensed Operator Training, Revision 6
Lesson Plan 2611-PGD-2621.828.0.0036, Reactor Manual Control System for Initial Licensed Operator Training, Revision 5
OCGS Technical Specifications
OCGS Updated Final Safety Analysis Report
Operator Log Query for Entries into ABN-32 (February 2003 to March 2006)
Operator Log Query for ESW Pump Runs (January 15, 2004 to February 28, 2006)
Oyster Creek Station Ownership Committee (SOC) Package for April 25, 2006
Plant Process Computer Data for Manual Heat Balance Calculation (June 2005 to August 2005)
Plant Process Computer Data for MSIV Stroke Time for NS04A/B and NS03A/B November 16, 2004, February 3, 2006, May 6, 2006)
Plant Process Computer Data for Stack Effluent Gaseous Release (October 2005 to April 2006)
Problem Analysis Detailed Report, AOG 'B' Recombiner Detonation (February 13, 2006)
Slides from ECP presentation on Safety Conscious Work Environment

LIST OF ACRONYMS

AC	Alternating Current
ACE	Apparent Cause Evaluation
AOG	Augmented Off-Gas System
CAP	Corrective Action Program
CCA	Common Cause Analysis
CFR	Code of Federal Regulations
CR	Condition Report
DC	Direct Current
EAL	Emergency Action Level
ECP	Employee Concerns Program

EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
FASA	Focused Area Self-Assessment
FIN	Finding
FSAR	Final Safety Analysis Report
HVAC	Heating, Ventilation and Air Conditioning
IMC	NRC Inspection Manual Chapter
IR	Issue Report
IST	In-Service Test
MSIV	Main Steam Isolation Valve
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OCGS	Oyster Creek Generating Station
OE	Operating Experience
PI&R	Problem Identification & Resolution
PPC	Plant Process Computer
RCA	Root Cause Analysis
RMC	Reactor Manual Control
Rx	Reactor
SCWE	Safety Conscious Work Environment
SDP	Significance Determination Process
SOC	Station Oversight Committee
TS	Technical Specifications